

## Remarks

### I. The Amendments

The specification of the application has been amended herein to add a new Sequence Listing. In the accompanying Amendment and Response Under 37 C.F.R. § 1.111, the application was amended to add corresponding sequence identification numbers.

### II. Submission of Computer Readable Form of Sequence Listing

Enclosed herewith is a 3.5 inch computer diskette containing a copy of the enclosed Sequence Listing in ASCII text.

### III. Statements to Comply with Sequence Listing Rules

In compliance with 37 C.F.R. § 1.821(f), Applicants' undersigned attorney hereby states that the content of the paper and computer readable copies of the Sequence Listing submitted herewith are the same. In accordance with 37 C.F.R. § 1.821(g), Applicants' undersigned attorney hereby states that the Sequence Listing submitted herewith does not add new matter to the application.

## Conclusion

In light of the amendments and remarks above, Applicants submit that they have now fully complied with all Sequence Listing rules. If, in the opinion of the Examiner, a phone call may help to expedite the prosecution of this application, the Examiner is invited to call Applicants' undersigned attorney at (202) 419-7013.

Respectfully submitted,

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## **Remarks**

### **I. Status of the Application and Claims**

As originally filed, the present application had a total of 36 claims. These have all now been cancelled and new claims 37-49 have been introduced.

### **II. The Amendments**

Support for new claims 37 and 38 may be found in original claims 1, 4 and 17.

Support for new claims 39, 45 and 48 may be found in original claim 15, and support for new claims 40, 46 and 49 may be found in original claim 16.

Support for new claims 41-44 may be found in original claim 8. Claim 41 was rewritten in an independent format and the position of the lysine biotinylation site was expressed in terms of its position in SEQ ID NO:2. Originally, this was expressed as being at position 89 based upon Figure 1. By comparing sequences, the corresponding position in SEQ ID NO:2 should be apparent. Also, the claim now specifies that peptides must be at least 63 amino acids in length reading from the C-terminus of SEQ ID NO:2 (see Figure 1 and the description of experiments on page 8 of the specification, first paragraph for support).

Finally, support for new claim 47 may be found in original claim 9.

In addition to the claim amendments described above, the legend for Figure 1 was amended to incorporate sequence identification numbers. This was done in order to properly conform with sequence listing rules. Accompanying the present response is a separate amendment that introduces corresponding changes in the Sequence Listing itself.

None of the amendments described above add new matter to the application, and their entry is therefore respectfully requested.

### **III. Affirmation of Restriction Election**

Applicants hereby affirm that they have elected restriction Group I which includes claims 1-4, 7-9 and 15-17 with an additional restriction imposed by the Examiner that these claims be limited to PSTCD peptides. Applicants respectfully reserve the right to reintroduce broader claims in a continuation application and to appeal the Examiner's limitation of claims to specific peptides or proteins. The claims as originally drafted included all proteins that are biotinylation-competent. If the Examiner believed that this was overly broad, Applicants submit that the proper way to handle this would be with a rejection under 35 U.S.C. § 112. By imposing a restriction requirement, the Examiner has, in effect, prevented Applicants from claiming the full scope of the invention that they believe they are entitled to. Also, Applicants wish to point out that the amendments restricting claims to PSTCD peptides have been made strictly in response to the restriction requirement and are therefore only tangentially related to the equivalents available for the peptides expressly recited. Thus, Applicants submit that the full range of equivalents for these peptides should still be available.

### **IV. Compliance with Sequence Listing Rules**

As indicated previously, the application has now been amended to incorporate sequence identification numbers for sequences appearing in Figure 1. A separate document is enclosed amending the Sequence Listing.

### **V. Response to Claim Objections**

On page 3 of the Office Action, the Examiner objects to claim 2 for failing to spell out the complete definition of the abbreviation "PSTCD." In the amended claims, this abbreviation is defined the first time that it is used.

## **The Rejections**

### **I. Rejections Under 35 U.S.C. § 112**

On pages 4-6 of the Office Action, the Examiner rejects original claims 2 and 3 under 35 U.S.C. § 112. The claims are first rejected under the second paragraph of section 112 for

allegedly failing to adequately specify the position of the lysine that undergoes biotinylation and for not adequately specifying the orientation of the 63 amino acids required to be present in peptides. A second rejection is then made under the first paragraph of section 112 based primarily upon the argument that, by failing to specify the location of the 63 amino acids and account for the presence of critical C-terminal residues, one of skill in the art would be required to engage in undue experimentation to identify operative embodiments.

Applicants believe that they have overcome both of the rejections made under section 112 in the claims as amended herein. Claims 37-40 now specify a PSTCD polypeptide of SEQ ID NO:2. It does not appear that the Examiner included this designation of peptides in the present rejection and, in fact, accepted claim 17 (which uses this designation) as being allowable.

To the extent that the remaining claims still define PSTCD peptides based upon length and the presence of a biotinylation site, these parameters have now been more precisely specified. In particular, the position of the lysine undergoing biotinylation has been defined by reference to SEQ ID NO:2 and there should therefore be no ambiguity in this regard. Similarly, claims now specify that the required 63 amino acids are read from the C-terminus as shown in SEQ ID NO:2. Again, there should be no ambiguity with respect to the location of this sequence. In light of these changes, Applicants submit that the Examiner's arguments that critical residues might not be present in peptides and that one of skill in the art would be faced with an essentially unlimited number of possible permutations to test have been obviated. Applicants would also like to point out that their conclusion with regard to the length of PSTCD peptides required for biotinylation is based upon experiments performed using truncated forms of PSTCD as described in the first paragraph on page 8 of the specification. The orientation of the various peptides used in those experiments including the one that is 63 amino acids in length from the C-terminus, is shown in Figure 1.

In light of the amendments and discussion above, Applicants submit that the Examiner's rejection of claims under 35 U.S.C. § 112 has been overcome. It is therefore respectfully requested that this rejection be withdrawn.

## **II. Rejection of Claims Under 35 U.S.C. § 102**

On pages 6 and 7 of the Office Action, the Examiner rejects original claims 1-3 and 15-16 under 35 U.S.C. § 102(b) as being anticipated by Cronan (U.S. 5,252,466) and by Cress, *et al.* (EP 511 747). The definition for PSTCD peptides provided in claim 17 was not included in the Examiner's rejection and it is this definition that has now been incorporated into new claims 37-40 (corresponding to original claims 1-3, 15 and 16). In light of this amendment, Applicants submit that the Examiner's rejection of claims has been overcome and it is respectfully requested that this rejection be withdrawn.

New claims 41-49 include the limitations of original claims 8 and 9 which were not included in the rejections made under 35 U.S.C. § 102. Thus, these claims should still be allowable over the prior art references that have been cited.


## **Conclusion**

In light of the amendments and discussion above, Applicants submit that all of the Examiner's rejections have been overcome. It is therefore respectfully requested that these rejections be withdrawn and that the claims presently pending in the application be allowed.

If, in the opinion of the Examiner, a phone call may help to expedite the prosecution of this application, the Examiner is invited to call Applicants' undersigned attorney at (202) 419-7013.

Respectfully submitted,

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